CITY OF LODI INFORMAL INFORMATIONAL MEETING "SHIRTSLEEVE" SESSION CARNEGIE FORUM, 305 WEST PINE STREET **TUESDAY, JUNE 27, 2000**

An Informal Informational Meeting ("Shirtsleeve" Session) of the Lodi City Council was held Tuesday, June 27, 2000 commencing at 7:00 a.m.

ROLL CALL

Present:

Council Members - Hitchcock (left at approximately 7:50 a.m.), Land, Nakanishi

and Mann (Mayor)

Absent:

Council Members - Pennino

Also Present:

City Manager Flynn, Deputy City Manager Keeter, Finance Director McAthie,

Community Development Director Bartlam, Public Works Director Prima, City Attorney

Hays and Interim City Clerk Taylor

Also present was a representative from the Lodi News Sentinel and The Record.

TOPIC(S)

Transportation Projects 1.

ADJOURNMENT

Council adjourned discussion of the closed session item to Wednesday, June 27, 2000 at 7:00 p.m. The meeting was adjourned at approximately 7:50 a.m.

ATTEST:

Jacqueline L. Taylor

Interim City Clerk



SHIRTSLEEVE SESSION

06/23/00

AGENDA TITLE: 2000 Signal Priority Study

MEETING DATE: June 27, 2000

PREPARED BY: Public Works Director

At the Shirtsleeve Session, the Public Works Department staff will be presenting a summary of the City's Signal Priority Study. This item is on the July 5, 2000, Council agenda. The following key items will be briefly discussed:

Primary Purpose – The Public Works Department began a program of studying non-signalized intersections with high volumes and accidents. The primary purpose was to determine if any of these intersections met the minimum traffic signal criteria established by Caltrans and, if so, in what order of priority they should be installed. It also became necessary to prioritize the signal installations when the cost of installing a traffic signal exceeded available construction funds.

Previous Intersections Installed Based on Past Signal Priority Studies – Since 1970, the City has installed slightly over one new traffic signal per year, as shown in the attached study.

Caltrans Traffic Signal Guidelines – Caltrans has adopted eleven traffic signal warrants that the City uses as a guideline to determine where signals are considered for installation.

Priority System Worksheet – After the Caltrans signal warrants and other factors are reviewed, the intersections are ranked using the priority system. Points are assigned for the traffic volumes entering the intersection, accident history, speed of traffic, proximity to nearest existing traffic signal, and special conditions.

Results – Fourteen of the nineteen intersections satisfied the Caltrans guidelines. The scoring results are summarized in Table 1 below.

Funding – Staff has applied for funds from the Hazard Elimination Safety (Safe Routes to School), CMAQ, REMOVE, STP, and TDA programs. There is \$120,000 budgeted in the fiscal year 2000/01 CIP for one traffic signal installation. Regional Impact Fee funds can also be appropriated for several intersections.

Summary – Table 2 presents a summary and description of the top ten intersections. We have received requests for traffic signals at all of the top ten locations except at one intersection (Stockton Street and Tokay Street). Although the Study provides a systematic process to determine which intersections should be considered for a signal, City Council can choose any intersection for installation in fiscal year 2000/01.

APPROVED:		
	H. Dixon Flynn City Manager	
SS2000SIGNLPRIORITY	, , ,	

TABLE 1

	INTERSECTION	SCORE
1.	Harney Lane and Stockton Street	352
2.	Lodi Avenue and Mills Avenue	330
3.	Harney Lane and Ham Lane	308
4.	Lockeford Street and Stockton Street	307
5.	Cherokee Lane and K-Mart south driveway*	277
6.	Lockeford Street and Sacramento Street	275
7.	Stockton Street and Tokay Street*	242
8.	Century Boulevard and Ham Lane	241
9.	Mills Avenue and Elm Street	172
10.	Turner Road and California Street/Edgewood Driv	re 143
11.	Elm Street and Pacific Avenue*	130
12.	Cherokee Lane and Tokay Street	109
13.	Turner Road and Sacramento Street*	98
14.	Cherokee Lane and Elm Street	97
15.	Century Boulevard and Scarborough Drive*	N/A, did not satisfy Caltrans warrant
16.	Cherokee Lane and Vine Street	N/A, did not satisfy Caltrans warrant
17.	Hutchins Street and Pine Street	N/A, did not satisfy Caltrans warrant
18.	Lockeford Street and California Street*	N/A, did not satisfy Caltrans warrant
19.	Pine Street and Stockton Street	N/A, did not satisfy Caltrans warrant

Notes:

- 1. Intersections with pending fund applications are shown above in **bold**.
- 2. The intersections with an asterisk were included in the 1991 Study.
- 3. The Lower Sacramento Road and Tokay Street intersection was not included in the Study since a signal will be installed with the Lower Sacramento Road Widening Improvement Project.

Richard C. Prima, JA Public Works Director

Prepared by Paula J. Fernandez, Associate Traffic Engineer, and Rick S. Kiriu, Senior Engineering Technician

RCP/PJF/RSK/Im

Attachments

cc: Street Superintendent Transportation Manager Associate Traffic Engineer

TABLE 2 2000 SIGNAL PRIORITY STUDY TOP TEN INTERSECTIONS

1. Harney Ln & Stockton St

The ranking at this intersection is attributed to increasing daily traffic on Harney Ln (up 4,000 vehicles or 30%), which creates fewer gaps for drivers entering from Stockton St and also the high vehicle speeds on Harney Ln. Drivers stopped south on Stockton St can also experience difficulty seeing approaching westbound traffic due to the alignment of the east leg and unimproved northeast corner (only the NW corner is improved). This intersection is four legged, although the south leg is a dead end county road with approximately 10 residences. The City has recently received a Tentative Parcel Map for a one acre site on the northeast corner. This map will dedicate the necessary right-of-way so the improvements at this corner will be included with the signal installation.

2. Lodi Ave & Mills Ave

The ranking at this intersection is due to increasing traffic volumes on both streets and relatively high number of accidents. At multi-way stop controlled intersections with several lanes of traffic entering the intersection, it can be difficult at times to determine who can proceed. This may contribute to accidents at this intersection.

3. Harney Ln & Ham Ln

The ranking at this intersection is due to the increasing traffic volumes on both streets, accidents, and high speeds on Harney Ln. Daily traffic volumes entering from both streets increased by 3,500 (30%). The increase in volume on the Harney Ln reduces the number of gaps for drivers making a left turn from Ham Ln. Although this intersection will likely be signalized at some time, it is currently a "T" intersection, and the eventual extension of Mills Ave to Harney and Century Blvd to Lower Sacramento Rd may relieve some of the traffic now using the intersection.

4. Lockeford St & Stockton St

The need for a traffic signal at this intersection has been demonstrated as it has ranked number one since first studied in 1988. In 1997 a 4-way stop was installed as an interim measure until a traffic signal could be installed. This action reduced accidents, hence the fall in ranking. The reasons we have not proceeded with the signal installation is primarily due to the cost, as there are design considerations created by the elevated railroad tracks adjacent to the intersection. We are awaiting the results of an application for federal funds we have submitted to install the costly signal. Current funds budgeted for a traffic signal would be insufficient for this intersection since this intersection needs major roadway improvements.

5. Cherokee Ln & K-Mart SC

The ranking at this location is due to the high traffic volumes on Cherokee Ln, the shopping center driveway and accidents. The increased accidents is likely associated with increased volumes at this driveway. As part of the Cherokee Lane Improvements, a median was installed across the northern driveway. The median eliminated left turns into and out of the north driveway, directing these drivers to the remaining southern driveway. This location is also considered a "T" intersection. Although it appears to be a four legged intersection, the Flora St alignment, located across the driveway on Cherokee Ln has been abandoned. Our main concern at this location is it's close proximity to the signal at Lodi Ave. An interconnected system would need to be installed with the Cherokee Lane and Lodi Avenue intersection and coordinating the signals. Another alternative is to provide an additional access across the railroad tracks at Lodi Avenue.

6. Lockeford St & Sacramento St

The ranking at this intersection is due to the high traffic volumes on Lockeford St providing fewer gaps for driver on Sacramento St. Considering traffic volumes on Sacramento St are relatively low, the number of accidents are fairly high, although they have dropped following the correction of a suspected visibility problem in 1990. Although there may be a need for a signal at this location sometime in the future, staff will pursue action to further reduce accidents, particularly since this intersection is close to the existing signal at Church St and will be relatively close to the proposed signal at Stockton St.

7. Stockton St & Tokav St

The ranking at this intersection is due to the traffic volumes on both streets and accidents. While neither street alone has a particularly high volume, the combined volume at this four-way stop intersection is high. There have been few accidents and the volume split between the two streets are favorable for a four- way stop.

8. Century Blvd & Ham Lane

The ranking at this intersection is due to the traffic volumes on both streets. Daily traffic volumes entering the intersection have increased by more that 3,500 vehicles (20%); however, traffic accidents have declined. The intersection is adjacent to a high school and park and can experience occasional high traffic periods and pedestrian activity. Although traffic volumes are relatively high, accidents are low implying that it appears to be working as a four-way stop at this time. However, of the four-way stop intersections studied, it has the most lanes approaching the intersection to monitor and it has been noted that during peak periods it can be difficult to determine when you can proceed. Because of this intersections proximity to the school site, we have applied for and are awaiting the results of our request for funding a traffic signal at this intersection.

9. Mills Ave & Elm St

The ranking at this intersection is due to the volumes on both streets. Daily traffic volume increased only slightly and accidents fell slightly. The four-way stop intersection is adjacent to an elementary school and can experience periods of high traffic and pedestrian volumes. The intersection also currently receives some traffic from a nearby high school and there is a Middle School to be constructed north of the intersection which will undoubtedly increase traffic in the area. Because of this intersections proximity to the school site, we have applied for and are awaiting the results of our request for funding a traffic signal at this intersection.

10. Turner Road and California Street/Edgewood Drive

The ranking at this intersection is due to traffic volumes on the major street. Daily traffic volumes have increased slightly on Turner Road. In the past four years, there has been one accident that is considered correctable with a traffic signal. There have been several left versus thru accidents on Turner Road and a left turn lane could eliminate this type of collision. Removal of parking adjacent to intersections and fronting several residences would be necessary to install left turns lanes on Turner Road.



TRAFFIC SIGNAL PRIORITY STUDY (Abridged Edition)

July 2000

CITY OF LODI DEPARTMENT OF PUBLIC WORKS

CITY OF LODI

PUBLIC WORKS DEPARTMENT

TRAFFIC SIGNAL PRIORITY STUDY (Abridged Edition)

July 2000

PREPARED BY:

Paula Fernandez, Associate Traffic Engineer Rick Kiriu, Senior Engineering Technician Jaime Cordoba, Engineering Intern

UNDER THE DIRECTION OF:

Richard C. Prima, Jr., Public Works Director F. Wally Sandelin, City Engineer

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	The Priorities	
	The Intersections	
	dix Signal Priority Worksheets	

SCOPE OF STUDY

In 1970, the Engineering Division began a program of studying high traffic volume and high accident non-signalized intersections within the City of Lodi. The primary purpose of these studies was to determine whether any of these intersections warranted the installation of traffic signals and, if so, in what order of priority should they be installed. Since 1970, the study has been updated several times, most recently in 1991.

II THE WARRANTS

The warrants used for traffic control signals are those adopted by the State of California and published in the California Department of Transportation (Caltrans) "Traffic Manual."

The satisfaction of a warrant is not necessarily justification for signals. Delay, congestion, confusion or other evidence of the need for right-of-way assignment must be shown. The City may also find it advantageous to install signals at one intersection ahead of another because of a scheduled street project.

The types of warrants are:

Warrant 1 - Minimum vehicular volume

Warrant 2 - Interruption of continuous traffic

Warrant 3 - Minimum pedestrian volume

Warrant 4 - School crossings

Warrant 5 - Progressive movement (not applicable)

Warrant 6 - Accident experience

Warrant 7 - Systems (not applicable in Lodi)

Warrant 8 - Combination of warrants

Warrant 9 - Four hour volume

Warrant 10 - Peak hour delay

Warrant 11 - Peak hour volume

Since the last study update, there have been some minor changes to Warrant 3. Pedestrian volumes needed were modified and requirements for vehicle gaps, signal spacing, and progressive movement were added. Warrant 3 is difficult to satisfy, and none of the locations met this warrant.

III. THE PRIORITIES

When the cost of installing traffic signals exceeds available construction funds, it is necessary to determine a systematic method of prioritizing signal installation. Intersections meeting one or more of the Caltrans Warrants are assigned priority ranking based on a point system.

In 1985, the City Council and the former Highway and Transportation Committee of the Chamber of Commerce expressed concerns over the relative weighting of various factors, such as, accidents and speeds in the 1970 priority system. The priority system was revised based upon a study that compared five systems used by northern California cities, including Lodi.

In summary, the intersections that meet the Caltrans signal warrants would rate highest on the priority system if they have the following characteristics:

- a. High traffic volume entering the intersection;
- b. Large number of accidents of a type that could be corrected by the installation of signals;
- c. High approach speeds;
- d. Be located a considerable distance from another signalized intersection.

Exhibit A is an example of the priority worksheet. A more detailed description of each priority characteristic is provided below.

<u>Traffic Volumes</u> – Points are assigned using a combination of total approach volume and percentage of minor street traffic. More points are given as the total approach volumes increase. Some additional points are given as the minor street percentage increases. Points for vehicular volumes are taken from a volume table shown on the priority worksheets.

As an example, an intersection with a total of 12,000 vehicles daily entering from all four approaches and 2,400 (20%) vehicles entering from the two minor approaches, would have a point rating of 92. The closer the traffic from the minor street approaches 50% of the total volume entering the intersection, the higher the point rating. The same intersection with 4,800 vehicles (40%) entering from the minor approaches would have a point rating of 132.

Accidents – Only accidents that can be corrected by installation of a signal are considered; such as right angle collisions and most pedestrian accidents. A four-year period is evaluated with 12 points per accident for the present year and 6 points per accident for the second to fourth years. Pedestrian accidents count as 1.5 points. Assigning more points for the most current year makes the system more responsive to recent changes.

<u>Approach Speed</u> – Points given for approach speeds range from 0 points for 25 mph to 150 points for 50 mph and more. More points are given as the approach speeds on the major street increase because of the higher potential of serious accidents. Four-way stop sign controlled intersections are given 0 points.

<u>Coordinated Movement</u> – Negative points are given to intersections within 1,200 feet of another signalized intersection. The minimum distance between signalized intersections is 600 feet. When signalized intersections are properly located and timed, traffic can effectively flow through the intersections.

<u>Special Conditions</u> – This factor is applied to two-way controlled intersections unless the accident history indicates existing four-way stop control is insufficient. Additional factors may be considered such as traffic at adjacent intersections, unusual geometry or project scheduling requirements.

IV. THE INTERSECTIONS

Since 1970, the Engineering Division has studied many intersections to determine whether they warranted the installation of traffic signals. As a result of these studies, signals have been installed at the following thirty-four intersections:

- 1. Turner Road and Ham Lane
- 2. Ham Lane and Elm Street
- Lodi Avenue and Stockton Street
- 4. Lodi Avenue and Crescent Avenue
- Lockeford Street and Church Street
- 6. Kettleman Lane and Ham Lane
- 7. Kettleman Lane and Church Street
- 8. Hutchins Street and Century Boulevard
- 9. Kettleman Lane and Stockton Street
- 10. Ham Lane and Vine Street
- 11. Lodi Avenue and Fairmont Avenue
- 12. Hutchins Street and Harney Lane
- 13. Pine Street and Sacramento Street
- 14. Ham Lane and Tokay Street
- 15. Cherokee Lane and Lockeford Street
- 16. Ham Lane and Lockeford Street
- 17. Victor Road and Cluff Avenue
- 18. Turner Road and Church Street
- 19. Turner Road and Lower Sacramento Road (N)
- 20. Cherokee Lane and Hale Road
- 21. Hutchins Street and Vine Street
- 22. Kettleman Lane and Central Avenue
- 23. Kettleman Lane and Crescent Avenue
- 24. Kettleman Lane and Mills Avenue
- 25. Lower Sacramento Road and Elm Street
- 26. Lower Sacramento Road and Lodi Avenue
- 27. Lower Sacramento Road and Vine Street
- 28. Turner Road and Lower Sacramento Road / Woodhaven Lane
- 29. Turner Road and Mills Avenue
- 30. Turner Road and Stockton Street

The intersections included in the current study that satisfied one or more of the Caltrans warrant(s) for the consideration of a traffic signal have been prioritized. A summary of the warrant results and priority ranking are presented on **Tables 1 & 2**. Existing a warranted traffic signal locations are graphically presented on **Exhibit B**. The intersections that warrant consideration of a traffic signal are listed below, in priority order. Of the fourteen signals ranked, the City has applied for funding for traffic signals at the six intersections shown in bold.

1.	Harney Lane and Stockton Street	352
2.	Lodi Avenue and Mills Avenue	330
3.	Harney Lane and Ham Lane	308
4.	Lockeford Street and Stockton Street	307
6. 5.	Lockeford Street and Sacramento Street	275
	Cherokee Lane and K-Mart south driveway	282 277
7.	Stockton Street and Tokay Street	242
8.	Century Boulevard and Ham Lane	241
9.	Mills Avenue and Elm Street	172
10.	Turner Road and California Street / Edgewood Drive	143
11.	. Elm Street and Pacific Avenue	130
12.	. Cherokee Lane and Tokay Street	109
13.	. Turner Road and Sacramento Street	98
14.	. Cherokee Lane and Elm Street	97

The point totals presented in Table 2 are close for some intersections; thereby, indicating that their ranking are basically equal. Differences of less than 20 points are not considered significant. The Signal Priority Worksheets are presented in the Appendix; however, the signal warrant sheets, collision diagrams, and volume sheets for all of the intersections studied are not included in this abridged edition.

Intersections studied that do not warrant the installation of traffic signals at this time are:

- 1. Century Boulevard and Scarborough Drive
- 2. Cherokee Lane and Vine Street
- 3. Hutchins Street and Pine Street
- 4. Lockeford Street and California Street
- 5. Pine Street and Stockton Street



CITY OF LODI

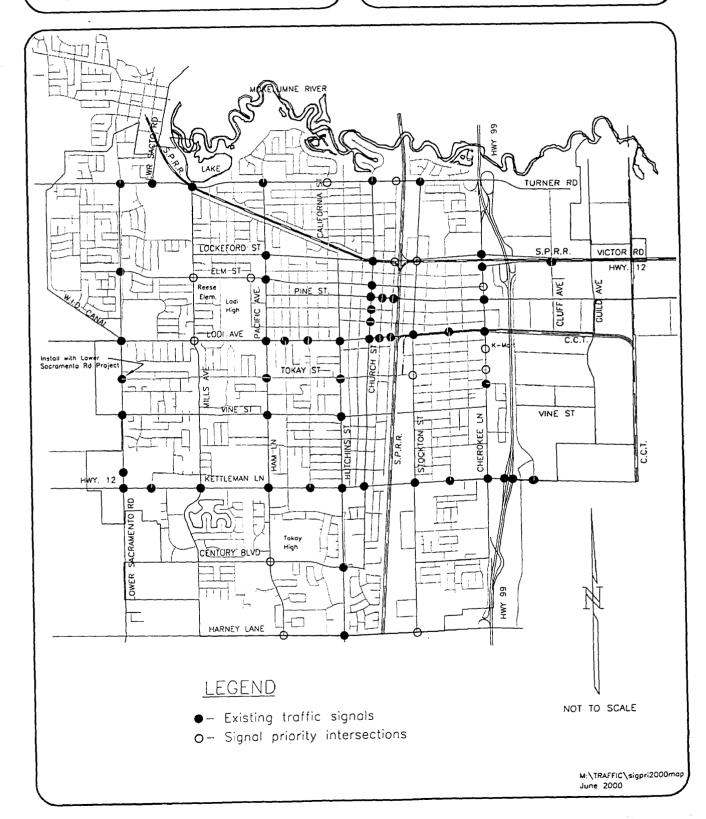
Public Works Department

TRAFFIC SIGNAL PRIORITY WORKSHEET

FACTOR Volume Accidents Speed Coordinated Movement Special	12 po 6 poin (Pedes	ints po its per strian	er acc r accid accide	ident lent fo	or seco	Tota 12 10 22 53 92 107 123 128 132 137 141 highes	ar	14 15 30 71 124 142 161 169 176 183 190		16 21 41 93 160 180 208 210 229 240 250	17 24 48 106 180 208 236 249 261 273 285	18 27 55 119 200 232 264 278 292 306 320	19 30 62 132 220 256 292 308 323 338 353	20 33 70 145 240 280 320 338 355 372 389	POINTS
Accidents Speed Coordinated Movement	Street % 5 10 15 20 25 30 35 40 45 50 Do no 12 po 6 poin (Pedes	4 10 25 42 51 61 63 65 67 68 t interints per strian	5 12 31 51 62 73 75 77 79 80 rpolate	6 15 37 60 72 85 87 89 91 95 e-use	8 18 45 76 90 104 108 111 114 117 e next	12 10 22 53 92 107 123 128 137 141 highes	13 12 26 62 108 125 142 148 154 160 165 t value	14 15 30 71 124 142 161 169 176 183 190	15 18 34 80 140 160 180 188 196 206	16 21 41 93 160 180 208 210 229 240 250	24 48 106 180 208 236 249 261 273 285	27 55 119 200 232 264 278 292 306 320	30 62 132 220 256 292 308 323 338 353	33 70 145 240 280 320 338 355 372 389	
Speed Coordinated Movement	35 40 45 50 Do no 12 po 6 poin (Pedes	63 65 67 68 t inter ints per strian	75 77 79 80 rpolate er acci r accide	87 89 91 95 e - use ident	108 111 114 117 e next for record	128 132 137 141 highes ent ye	148 154 160 165 t value	169 176 183 190	188 196 206	210 229 240 250	249 261 273 285	278 292 306 320	308 323 338 353	338 355 372 389	
Speed Coordinated Movement	6 poin (Pedes	its per strian	r accid	dent fo	or seco	nd to		year					0		0.1
Coordinated Movement	l <u></u> l													AL	
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2000 SIGNAL PRIORITY STUDY



2000 SIGNAL PRIORITY STUDY TRAFFIC SIGNAL WARRANT RESULTS

	1-Minimum Vehicle Vol.	2-Intermetion of Contin.	3. Minimum Pedestrian V.	4. School Crossings	5-Progressive Movemen	6-Accident Experience	Z-Sustems Warrant	8. Combination of Warra	9-Four Hour Volume	10. Peak Hour Delay	11. Peak Hour Volume
LOCATION	~/	√/	m/	4/	ις'/	<i>'</i> /	~/	«ó/	o'/	10	11.
1. Harney Ln & Stockton St	Y	TY	N	N/A	N/A	l N	N/A	Y	Y	N/C	Y
2. Lodi Ave & Mills Ave	Y	N	N	N/A	N/A	Y	N/A	Y	Y	N	Y
3. Harney Ln & Ham Ln	Y	N	N	N/A	N/A	N	N/A	Y	Y	N/C	Y
4. Lockeford St & Stockton St	N	N	N	N/A	N/A	Υ	N/A	Y	N	N	N
5. Lockeford St & Sacramento St	N	N	N	N/A	N/A	Y	N/A	N	N	N/C	N
6. Cherokee Ln & K-Mart SC	Y	Y	N/C	N/A	N/A	N	N/A	Y	Y	N/C	Y
7. Stockton St & Tokay St	Y	N	N	N/A	N/A	N	N/A	N	Y	N	N
8. Ham Ln & Century Blvd	Y	N	N	N/A	N/A	N	N/A	Y	Y	N	Y
9. Mills Ave & Elm St	N	N	N	N/A	N/A	N	N/A	N	Y	N	N
10. Turner Rd & California St	N	N	N	N/A	N/A	N	N/A	N	Y	N	Y
11. Elm St & Pacific Ave	N	N	N/C	N	N/A	N	N/A	N	N	N/C	Υ
12. Cherokee Ln & Tokay St	N	N	N	N/A	N/A	N	N/A	N	Y	N/C	N
13. Turner Rd & Sacramento St	N	Y	N	N/A	N/A	N	N/A	N	Y	N/C	Υ
14. Cherokee Ln & Elm St	Ν	N	N	N/A	N/A	N	N/A	N	N	N/C	Y
15. Century Blvd & Scarborough Dr	N	N	N	N	N/A	N	N/A	N	N	N	N
16. Cherokee Ln & Vine St	N	N	N	N/A	N/A	N	N/A	N	N	N	N
17. Hutchins St & Pine St	N	N	N	N/A	N/A	N	N/A	N	N	N	N
18. Lockeford St & California St	N	N	N	N/A	N/A	N	N/A	N	N	N	N
19. Pine St & Stockton St	N	N	N	N/A	N/A	N	N/A	N	N	N	N

2000 SIGNAL PRIORITY STUDY PRIORITY RANKING RESULTS

Number of Points

LOCATION	VOLUME	ACCIDENTS	SPEED	COORDINATED MOVEMENT	SPECIAL CONDITIONS	<u>TOTAL</u>
1. Harney Ln & Stockton St	160	42	150	0	0	352
2. Lodi Ave & Mills Ave	240	90	0	0	0	330
3. Harney Ln & Ham Ln	148	48	112	0	0	308
4. Lockeford St & Stockton St	180	102	0	0	25	307
5. Lockeford St & Sacramento St	124	120	46	-65	50	275
6. Cherokee Ln & K-Mart SC	162	72	58	-80 - 65	50	2,82 277
7. Stockton St & Tokay St	206	36	0	0	0	242
8. Ham Ln & Century Blvd	229	12	0	0	0	241
9. Mills Ave & Elm St	160	12	0	0	0	172
10. Turner Rd & California St	41	6	96	0	0	143
11. Elm St & Pacific Ave	72	30	58	-80	50	130
12. Cherokee Ln & Tokay St	62	69	58	-80	0	109
13. Turner Rd & Sacramento St	48	18	82	-50	0	98
14. Cherokee Ln & Elm St	77	42	58	-80	0	97

Appendix

Major St:	Harney Ln	Volume: 12.5				
Minor St:	Stockton St	Volume: 3.1	% of Total 20			
		Total Volume: 15.6	(Volumes in 1000's)			

FACTOR	COMPUTATIONS											POINTS			
Volume	Minor										<u>-</u>				
	Street					Tota	l Ente	ring In	tersec	tion					
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	5	4	5	6	8	10	12	15	18	21	24	27	30	33	
	10	10	12	15	18	22	26	30	34	41	48	55	62	70	
	15	25	31	37	45	53	62	71	80	, 93 ,	106	119	132	145	
	20	42	51	60	76	92	108	124	140	(160)	180	200	220	240	
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	
	30	61	73	85	104	123	142	161	180	208	236	264	292	320	
	35	63	75	87	108	128	148	169	188	210	249	278	308	338	
	40	65	77	89	111	132	154	176	196	229	261	292	323	355	
	45	67	79	91	114	137	160	183	206	240	273	306	338	372	
	50	68	80	95	117	141	165	190	215	250	285	320	353	389	
	Do no	t inter	polate	e - use	next l	nighes	t value								160
Accidents	12 po	ints p	er acc	ident	for rec	ent ye	ar		1	Х	12	=	12		
					or seco			year	5	X	6	=	30		
	(Pede:	strian	accid	ents c	ount a:	s 1.5)								TOTAL	42
Speed	Use h	iahest	85 n	ercent	ile app	roach	speed	(4-wa	v stor	0 = 0)		***			
Opoda	Speed (_		28	30	32	34	36	38	40	42	44	46	48 / 50	١
	Points 4 12 20 28 36 46 58 70 82 96 112 130 150									150					
Coordinated	Distance from proposed signal to nearest existing signal.														
Movement	(Minimum distance is 600-feet)														
	Distance (ft) (1200) 1000 900 800 700 600														
ļ			Points		(0)	-20	-35	-50	-65	-80					0
Cnosial	Apply to two-way etop controlled intersections upless accident history														
Conditions	Special Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient.														
	CONDITION POINTS														
	Signal warranted under Caltrans pedestrian or school crossing warrant														
	Meets 50% of above requirements														
	Intersection adjacent to school, major pedestrian generator or RR tracks within intersection 50														
	On school or major generator route or RR tracks adjacent to intersection 25 Other														
	Other														
:	(Describe)									0					
	L	Rick H	(irio					Date:	June	7, 20	00		TOTA	AL POINTS	352

By: Rick Kiriu

TRAFFIC SIGNAL PRIORITY WORKSHEET

330

TOTAL POINTS

Major St: _	Lodi Av	/e				_		Volume:		8.8					
Minor St:	Mills A	ve				Volume: 6.7					% of Total 43				
				Total Volume: 15.5							(Volumes in 1000's)				
FACTOR						CC	OMPU	OITAT	NS						POIN
Volume	Minor														
	Street					<u>Tota</u>	al Ente	ring Ir	ntersec	ction					- 1
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	l
	5	4	5	6	8	10	12	15	18	21	24	27	30	33	
	10	10	12	15	18	22	26	30	34	41	48	55	62	70	İ

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	10	10	12	15	18	22	26	30	34	41	48	55	62	70	ı		
	15	25	31	37	45	53	62	71	80	93	106	119	132	145	1		
	20	42	51	60	76	92	108	124	140	160	180	200	220	240			
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	1		
	30	61	73	85	104	123	142	161	180	208	236	264	292	320	[
	35	63	75	87	108	128	148	169	188	210	249	278	308	338			
	40	65	77	89	111	132	154	176	196	229	261	292	323	355	1	ı	
	45	67	79	91	114	137	160	183	206	(240)	273	306	338	372			
	50	68	80	95	117	141	165	190	215	250	285	320	353	389			
	Do no	Do not interpolate - use next highest value												240			
Accidents	12 pc	oints p	er acc	ident	for rec	ent ye	ar		5	X	12	=	60			ı	
	6 poi	nts pe	r accid	dent fo	or seco	and to	fourth	year	5	X	6	=	30	•	1		
	(Pede	strian	accid	ents c	ount a	s 1.5)								TC	TAL	90	
Speed	Use h	nighest	: 85 p	ercent	ile app	roach	speed	(4-wa	y stop	0 = 0)							
•	Speed	-		28	30	32	34	36	38	40	42	44	46	48	50	<u> </u>	
		Points 4 12 20 28 36 46 58 70 82 96 112 130 150											0				
Coordinated	Distance from proposed signal to nearest existing signal.																
Movement	(Minimum distance is 600 feet) Distance (ft) (1200) 1000 900 800 700 600																
		F	Points		0	-20	-35	-50	-65	-80						0	
Special	Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient.																
Conditions																	
	CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection 25																
											:						
											·						
	Othe										,						
														0			
	(Desc	cribe)					(Describe)										

Date: June 7, 2000

Major St:	Harney Ln	Volume: _8.5					
Minor St:	Ham Ln	Volume: 4.3	% of Total 34				
		Total Volume: 12.8	(Volumes in 1000's)				

									iume:	12.8		ι	v Olulli	es in 10	50 S)
FACTOR						CC	ОМРИТ	ATIO	vs						POINTS
Volume	<u>Minor</u>														
	Street					Tota	al Ente	ring Ir	tersec	tion					
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	
	5	4	5	6	8	10	12	15	18	21	24	27	30	33	
	10	10	12	15	18	22	26	30	34	41	48	55	62	70	1
	15	25	31	37	45	53	62	71	80	93	106	119	132	145	
	20	42	51	60	76	92	108	124	140	160	180	200	220	240	
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	
	30	61	73	85.		123	142	161	180	208	236	264	292	320	İ
	35	63	75	87	108	128	(148)	169	188	210	249	278	308	338	ŀ
	40	65	77	89	111	132	154	176	196	229	261	292	323	355	
1:	45	67	79	91	114	137	160	183	206	240	273	306	338	372	
	50	68	80	95	117	141		190	215	250	285	320	353	389	148
	Do no	t inter	polate	- use	next l	nighes	t value								140
Accidents	12 po	ints p	er acc	ident	for rec	ent ye	ar		2	Χ	12	=	24		
	I -	•			or seco		fourth	year	4	Х	6	=	24		
	(Pede:	strian	accide	ents c	ount as	s 1.5)								TOTA	AL 48
Speed	Use h	iahest	85 ne	ercent	ile app	roach	speed	(4-wa	v stor	$\rho = 0$					
-,	Speed (-		28	30	32	34	36	38	40	42	44	46	48 5	0
	1	oints	4	12	20	28	36	46	58	70	82	96	(112)	130 15	50 112
0	D'												$\overline{}$		
Coordinated Movement					l signa 00 fee		arest e	existin	g sign	aı.					
Movement		istanc		e 15 0	/ \		900	800	700	600					
			Points		(0)	-20	-35	-50	-65	-80					0
			Onico		<u> </u>										
Special	Apply	to tw	o-way	stop	contro	olled in	tersec	tions (ınless	accid	ent his	story			
Conditions	indica	tes ex	isting	four-v	way st	op cor	itrol is	insuff	icient.						
					CC	NDITI	ON							POINT	s l
	Signal	warra	anted	under				orso	:hool d	crossir	ng war	rant		100	
					quirem						-			75	
	1				•		or ped	estriar	gene	rator o	or RR	tracks	;		
		withir	inter	sectio	n									50	
	On sc	hool c	or majo	or gen	erator	route	or RR 1	racks	adjac	ent to	inters	ectior	1	25	
	Other												-		
	(Desc	ribe)											-		0
	Ву:	Rick K	(iriu				-	Date:	June	7, 200	00		TOTA	AL POINT	rs 308



Major St: _	Lockeford St	Volume: _10.2		
Minor St:_	Stockton St	Volume: 3.9	% of Total	28
		Total Volume: 14.1	(Volumes in 10	000's)

FACTOR						CC	MPU	OITAT	NS					<u></u> -		POINTS
Volume	Minor										***					
	Street					Tota	el Ente	ring Ir	ntersec	tion						
	%	8	9	10	11	12	13	14	15	16	17	18	19	20		
	5	4	5	6	8	10	12	15	18	21	24	27	30	33		
	10	10	12	15	18	22	26	30	34	41	48	55	62	70		
1	15	25	31	37	45	53	62	71	80	93	106	119	132	145		
	20	42	51	60	76	92	108	124	140	160	180	200	220	240		
	25	51	62	72	90	107	125	142	160	180	208	232	256	280		
	30	61	73	85	104	123	142	161	(180)	208	236	264	292	320		
	35	63	75	87	108	128	148	169	188	210	249	278	308	338		
	40	65	77	89	111	132	154	176	196	229	261	292	323	355		
	45	67	79	91	114	137	160	183	206	240	273	306	338	372		
	50	68	80	95	117	141		190	215	250	285	320	353	389		180
					next l			<u>:</u>								
Accidents					for rec				1	X	12	=	12			
					or seco		fourth	year	15	X	6	=	90			400
	(Pede	strian	accide	ents c	ount as	3 1.5)					_			TOT	AL	102
Speed	Use h	niahest	85 p	ercent	ile app	roach	speed	 (4-wa	ay stop	= 0)						
	Speed		26	28	30	32	34	36	38	40	42	44	46	48	50	
	ı	Points	4	12	20	28	36	46	58	70	82	96	112	130 1	50	0
Coordinated	Dieta	noo fro	m pro	20000	t ciana	l to no	arest i	ovietir	ng sign	al				- -		
Movement					oo fee		alest	5XISUI	ig sign	aı.						
		Distanc			/ \	1000	900	800	700	600						
			Points		(0)	-20	-35	-50	-65	-80						0
					\smile											
Special									unless		ent hi	story				
Conditions	indica	ites ex	disting	four-	way sto	op cor	itrol is	insuf	ficient.						ļ	
					<u>CC</u>	NDITI	<u>0N</u>							POIN?	r <u>s</u>	
	Signa	l warr	anted	under	Caltra	ns pec	lestria	n or s	chool d	crossin	ng wa	rrant		100)	
	Meet	s 50%	of ab	ove re	quiren	nents								75		
	Inters					ıl, maj	or ped	estria	n gene	rator	or RR	tracks	;			
			n inter											50		
			or majo	or gen	erator	route	or <u>RR</u>	tracks	adjac	ent to	inters	ection	ו	(25))	
	Other	·				_							-			
	(Dage	ribe)		_		_							-			25
	Desc	iibe)											-			
	Ву:	Rick h	(iriu					Date:	June	7, 20	00		TOTA	AL POIN	ITS	307



Major St:	Lockeford St	Volume: 11.2	
Minor St:	Sacramento St	Volume: 2.4	% of Total 18
		Total Volume: 13.6	(Volumes in 1000's)

							10	tal Vo	ume.	13.6			v olum	es in 10	,00	S)
FACTOR						CC	OMPU	TATIO	VS.							POINTS
Volume	Minor													. .		
	Street					<u>Tota</u>	al Ente	ring In	tersed	tion					İ	
	%	8	9	10	11	12	13	14	15	16	17	18	19	20		
	5	4	5	6	8	10	12	15	18	21	24	27	30	33		
		10	12	15	18	22	26	30	34	41	48	55	62	70	ļ	
		25	31	37	45	53	62	71	80	93	106	119	132	145		
		42	51	60	76	92	108	(124)	140	160	180	200	220	240	-	
		51	62	72	90	107	125	142	160	180	208	232	256	280		
		61	73	85	104	123	142	161	180	208	236	264	292	320	-	
	_	63	75	87	108	128	148	169	188	210	249	278	308	338	- [
		65 67	77	89	111	132	154	176	196	229	261	292	323	355		
		67 68	79 80	91 95	114 117	137 141	160 165	183 190	206 215	240 250	273 285	306 320	338 353	372 389	ı	
	Do not								210	250	200	320	333	303		124
Accidents	12 poin								4	×	12	=	48			
	6 points	•				•		year	12		6	=	72	•		
	(Pedest									· 				тот	AL	120
Speed	Use hig	hest	85 pe	ercent	ile app	roach	speed	(4-wa	v stor	0 = 0)						
'	Speed (m		26	28	30	32	34	36	38	40	42	44	46	48	50	
	Po	ints	4	12	20	28	36	46	58	70	82	96	112	130 1	50	46
Coordinated	Distanc	e fro	m pro	nosec	Lsigna	l to ne	arest	existin	a sian	al.					寸	***************************************
Movement	(Minimu				-										- 1	
	Dis	stanc	e (ft)		1200	1000	900	800	(700	600					l	
		P	oints		0	-20	-35	-50	-65	08- (-65
Special	Apply t	o two	o-way	stop	contro	lled in	tersec	tions ı	ınless	accid	ent hi:	story				
Conditions	indicate											r				
Ì					cc	NDITI	ON							POINT	٠,	
	Signal v	M2FF2	ntad	under				n or sc	bool (orneeir	na wa	rrant		100	- 4	
	Meets 5						1631110	11 01 30			ig wa	110111		75	- 1	
	Intersed						or ped	lestriar	gene	rator	or <u>R</u> R	tracks	i	_	ı	
			-	sectio		,			-					50)	
	On sch	ool o	r majo	r gen	erator	route	or RR	tracks	adjac	ent to	inters	ection	ו	25	Ì	
	Other_												-			
	(Descrit	hal								,	· · · · · · · · · · · · · · · · · · ·		-			50
	(Descrit												-		〓	
	By: R	ick K	iriu					Date:	June	7, 20	00		TOTA	AL POIN	TS	275



 Major St:
 Cherokee Ln
 Volume:
 17.1

 Minor St:
 K-Mart South Driveway
 Volume:
 3.0
 % of Total 15

 Total Volume:
 20.1
 (Volumes in 1000's)

										unie.	2.0.1			v Gluin			
FACTOR							CC	MPUT	ATIO	vs							POINTS
Volume	<u>Mi</u> j	nor														1	
	<u>Str</u>	<u>eet</u>					Tota	al Ente	ring Ir	tersec	tion						
	% 8	8 9	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
	5 4		5	6	8	10	12	15	18	21	24	27	30	33	38	43	
	l		12	15	18	22	26	30	34	41	48	55	62	70	77	84	
	1			37	45	53	62	71	80	93	106	119	132	145	(162)	179	
				60	76	92	108	124	140	160	180	200	220	240	269		
	25 5			72	90	107	125	142	160	180	208	232	256	280			
	1			85	104	123	142	161	180	208	236	264	292	320	359	1	
	ì			87	108	128	148	169	188	210	249	278	308	338	379		
	i			89	111	132	154	176	196	229	261	292	323	355	398		
	1			91 95	114 117	137 141	160 165		206 215	240 250	273	306 320	338 353	372 389	418 437	1	
							highes			250	200	320	303	303	437	404	162
					···												
Accidents			•				ent ye			4	X	12	=	48	_		
	1 .	•					nd to	fourth	year	4	X	6	=	24		TAL	72
	(176	edestr	nan a	CCIG	ents co	Junt a	S 1.5)								10	JI AL	12
Speed	Us	se hiat	hest 8	85 ne	ercenti	ile ann	roach	speed	(4-wa	y stop) = Q)			_			
opes.		ed (mj		26	28	30	32	34	36	38	40	42	44	46	48	50	
	1	Poi		4	12	20	28	36	46	(58)	70	82	96	112	130	150	58
										$\stackrel{\smile}{-}$							
Coordinated						_		arest 6	existin	g sign	al.						
Movement	(M	linimu			e is 6												
		Dist	tance				1000			700	600						C.E.
			Ро	oints		0	-20	-35	-50	-65	-80						-65
Special	Δη	anly to	n two	-wav	/ stop	contro	olled in	tersec	tions s	ınless	accid	ent his	storv				
Conditions	1									icient.			,				
I			3	3		-	•								DO!	UTC	
	G:			_ 4 1			<u>ITIDNC</u>			. L 1 .		. ~			<u>POII</u>		
								iestriai	1 or Sc	1001	crossii	ng wai	Tant		7		
	1	eets 5						or ned	estriar	n dene	rator 4	or RR	tracks		,		
	""			-	section		, <u>1110]</u>	or bear	<u> </u>	. 99116	<u> </u>	J. 1111	.,	•	(5	0)	
	Or						route	or RR 1	tracks	adiac-	ent to	inters	ection	า	2	5	
	l .	ther								,							
	1	escrib	oe) —									····		-			
														• -	2	5	50
·																	256
	E	By: Ric	ck Ki	riu				_	Date:	June	7, 20	00		TOT	AL PO	INTS	26/2



Major St:	Stockton St	Volume: 8.6		
Minor St:	Tokay St	Volume: 5.9	% of Total4	‡ 1
		Total Volume: 14.5	(Volumes in 1000	0's)

FACTOR	COMPUTATIONS	POINTS
Volume	Minor	
Į	Street Total Entering Intersection	
	% 8 9 10 11 12 13 14 15 16 17 18 19 20	1
	5 4 5 6 8 10 12 15 18 21 24 27 30 33	-
	10 10 12 15 18 22 26 30 34 41 48 55 62 70	
	15 25 31 37 45 53 62 71 80 93 106 119 132 145	
	20 42 51 60 76 92 108 124 140 160 180 200 220 240	
	25 51 62 72 90 107 125 142 160 180 208 232 256 280	
	30 61 73 85 104 123 142 161 180 208 236 264 292 320	1
į	35 63 75 87 108 128 148 169 188 210 249 278 308 338	
	40 65 77 89 111 132 154 176 196 229 261 292 323 355	1
	45 67 79 91 114 137 160 183 (206) 240 273 306 338 372 50 68 80 95 117 141 165 190 243 250 285 320 353 389	
	50 68 80 95 117 141 165 190 215 250 285 320 353 389 Do not interpolate - use next highest value	206
Accidents		
Accidents	12 points per accident for recent year $0 \times 12 = 0$ 6 points per accident for second to fourth year $6 \times 6 = 36$	
	(Pedestrian accidents count as 1.5)	36
Speed	Use highest 85 percentile approach speed (4-way stop = 0)	<u> </u>
Оресси	Speed (mph) 26 28 30 32 34 36 38 40 42 44 46 48 50	
	Points 4 12 20 28 36 46 58 70 82 96 112 130 150	0
Coordinated	Distance from proposed signal to nearest existing signal.	
Movement	(Minimum distance is 600-feet)	
	Distance (ft) 1200 1000 900 800 700 600	
	Points 0 -20 -35 -50 -65 -80	0
Special	Apply to two-way stop controlled intersections unless accident history	
Conditions	indicates existing four-way stop control is insufficient.	
	CONDITION	
	Signal warranted under Caltrans pedestrian or school crossing warrant 100	
	Meets 50% of above requirements . 75	
	Intersection adjacent to school, major pedestrian generator or RR tracks	
	within intersection 50	
	On school or major generator route or RR tracks adjacent to intersection 25]
	Other	
	(Decoration)	0
	(Describe)	1
	By: Rick Kiriu Date: June 7, 2000 TOTAL POINTS	242



Major St:	Ham Ln	Volume: 9.6	
Minor St:	Century Blvd	Volume: 6.2	% of Total 39
		Total Volume: 15.8	(Volumes in 1000's)

FACTOR						CC	OMPUT	ATIO	NS							POINTS
Volume	Minor		-					-								
	Street					<u>Tot</u> a	<u>al Ente</u>	<u>ring Ir</u>	tersec	<u>ction</u>						
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	l	
	5	4	5	6	8	10	12	15	18	21	24	27	30	33		
	10	10	12	15	18	22	26	30	34	41	48	55	62	70		
	15	25	31	37	45	53	62	71	80	93	106	119	132	145		
	20	42	51	60	76	92	108	124	140	160	180	200	220	240		
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	1	
	30	61	73	85	104	123	142	161	180	208	236	264	292	320	I	
	35	63 65	75	87	108	128	148	169	188	210	249	278	308	338		
	40	65	77 70	89	111	132		176	196	(229)	261	292	323	355		
	45 50	67 68	79 80	91 95	114 117	137 141	160	183 190	206 215	240 250	273 285	306 320	338 353	372 389		
					next l				215	250	200	320	353	309		229
Accidents	12 po	ints p	er acc	ident	for rec	ent ye	ar	-	1	Х	12	=	12			
	1				or seco	-		year	0	X	6	=	0		l	
	(Pede	strian	accide	ents c	ount a	s 1.5)				•				TC	TAL	12
Speed	Use h	ighest	85 p	ercent	ile app	roach	speed	(4-wa	y stor	0 = 0)						
•	Speed (_		28	30	32	34	36	38	40	42	44	46	48	50	
	F	oints	4	12	20	28	36	46	58	70	82	96	112	130	150	0
Coordinated	Distar	nce fro	om pro	pose	d signa	l to ne	arest e	existin	g sign	al.						
Movement	•				i00 fee										1	
)istano	ce (ft)		(1200)	1000	900	800	700	600						
		F	Points		0	-20	-35	-50	-65	-80						0
Special	Apply	to tw	o-way	/ stop	contro	olled in	tersec	tions	unless	accid	ent his	story				
Conditions	indica	ites ex	kisting	four-	way st	ор сог	ntrol is	insuff	icient	•					İ	
					CC	ONDITI	ON							POI	NTS	
	Signa	l warr	anted	under				n or so	:haol i	crossir	na wai	rant		10		
					equiren									7		
	ľ						or ped	estriar	gene	rator o	or RR	tracks				
		withir	•			•	,		Ū					5	0	
	On so	hool c	or maj	or ger	erator	route	or RR	tracks	adjac	ent to	inters	ection	n	2	5	
	Other			<u> </u>									-			ļ
	(Desc	ribe)											-			0
	1															
	Ву:	Rick I	Ciriu				_	Date:	June	7, 200	00		TOTA	AL PO	INTS	241



Major St:	Mills Ave	Volume: 7.3	
Minor St:	Elm St	Volume: 5.7	% of Total <u>44</u>
		Total Volume: 13	(Volumes in 1000's)

									iuille.				v Olaili			
FACTOR						CC	OMPUT	ATIO	NS							POINTS
Volume	Minor															
	Street					Tota	al Ente	ring Ir	tersec	ction						
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	- [
	5	4	5	6	8	10	12	15	18	21	24	27	30	33		
	10	10	12	15	18	22	26	30	34	41	48	55	62	70	- 1	
	15	25	31	37	45	53	62	71	80	93	106	119	132	145		
	20	42	51	60	76	92	108	124	140	160	180	200	220	240	- 1	
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	- 1	
	30	61	73	85	104	123	142	161	180	208	236	264	292	320		
	35	63	75	87	108	128	148	169	188	210	249	278	308	338	- 1	
	40	65	77	89	111	132	154	176	196	229	261	292	323	355		
	45	67	79	91	114	137	(160)	183	206	240	273	306	338	372	١	
	50	68	80	95	117	141	1 6 5	190	215	250	285	320	353	389		400
	Do no	ot inte	rpolat	e - use	e next	highes	t value									160
Accidents	12 pc	oints p	er acc	ident	for rec	ent ye	ar		0	Х	12	=	0		I	
					or seco			year	2		6	=	12	•	1	
		•			ount a			•		•				TO	TAL	12
																
Speed	Use h	ighes	t 85 p	ercen	tile app	roach	speed	(4-wa	y stop	0 = 0					1	i
	Speed	(mph)	26	28	30	32	34	36	38	40	42	44	46	48	50	į
	f	Points	4	12	20	28	36	46	58	70	82	96	112	130	150	0
0 1 1	5: .									-1						
Coordinated				•	d signa		arest	existin	g sign	iai.						
Movement	1	mum d Distand		e is c	1200 1200		900	800	700	600					1	
	•		Points		(1200)	-20	-35	-50	-65	-80						0
			ronics		\bigcirc	-20	-55	-50								
Special	Apply	to tv	vo-wa	v stoc	contro	olled in	ntersec	tions	unless	accid	ent his	story				
Conditions					way st							•				
					•									POIN	ITC.	
	<u>.</u>			1		MDIT			- 1 1					10		
	1 -				r Caltra		estria	norse	enoor	crossii	ng wa	rrant		75		
					equiren o schoo		or nad	octria		rator	or DD	tranks		, .	'	
	inters		n aujat n inter			Ji, IIIaj	or peu	estiiai	i gene	atoi	oi nn	Hacks	•	50	,	
	One				nerator	route	or RR	tracke	adiac	ent to	inters	ection	1	25		
	Other		or maj	or ger	ioi a toi	.0016	J1 1111		acjac	J. 1. LO		.551101	•			
	1 011161												-		i	l
	(Desc	ribe)	· · · · · · · · · · · · · · · · · · ·							- 			-			0
	11												_			<u> </u>
	By:	Rick I	Kiriu					Date:	June	7, 20	00		TOTA	AL POI	NTS	172

Major St: Turner Rd Volume: 14.1

Minor St: California St / Edgewood Dr Volume: 1.5 % of Total 10

Total Volume: 15.6 (Volumes in 1000's)

								tai VO	iume.	15.6			voium	es in 1000) S)
FACTOR						CC	OMPUT	ΓΑΤΙΟ	NS						POINTS
Volume	Minor														1
	Street Total Entering Intersection														
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	
	5	4	5	6	8	10	12	15	18	21	24	27	30	33	
	10	10	12	15	18	22	26	30	34	(41)	48	55	62	70	
	15	25	31	37	45	53	62	71	80	93	106	119	132	145	1
	20	42	51	60	76	92	108	124	140	160	180	200	220	240	
	25	51	62	72	90	107	125	142	160	180	208	232	256	280	t
	30 35	61	73 75	85	104	123	142 148	161	180	208	236	264	292	320	
	40	63 65	75 77	87 89	108 111	128 132	154	169 176	188 196	210 229	249 261	278	308	338	
	45	67	77 79	91	114	137	160	183	206	240	273	292 306	323 338	355 372	
ļ	50	68	80	95	117	141	165	190	215	250	285	320	353	389	1
					next h					200	200	020	000	000	41
Accidents	12 po	ints p	er acc	ident	for rec	ent ve	ar		0	Х	12	=	0		
	1	•			or seco	•		year	1	-	6	=	6		
	(Pedes	strian	accide	ents c	ount as	s 1.5)			-	•				TOTAL	6
Speed	Use hi	ighest	85 pe	ercent	ile app	roach	speed	(4-wa	v sto	p = 0		$\overline{}$			
,	Speed (28	30	32	34	36	38	40	42	(44)	46	48 50	
	Р	oints	4	12	20	28	36	46	58	70	82	96	112	130 150	96
Coordinated	Distan	ce fro	m nro	nosed	d signa	l to ne	arest 4	evietin	a siar	nal					
Movement					00-fee		ui cot (JA13 (11)	9 3191	idi.					
		istand			/ \	1000	900	800	700	600					
		F	oints		(0)	-20	-35	-50	-65	-80					0
Special	vlaaA	to tw	o-way	stop	contro	lled in	tersec	tions (ınless	accid	ent his	story			
Conditions				•	way sto							,			
					CC	NDITI	ΩNI							POINTS	
İ	Signal	warr	ented	under				n or so	:hool	crossir	าต พลเ	rrant		100	
					equirem		i o o ti i ai		,,,,,,,,,		.gu.	i i di i i		75	
							or ped	estriar	gene	rator o	r RR	tracks	i		
		withir	inter	sectio	n	•	•		-					50	
	On sc	hool c	r majo	or gen	erator	route (or RR 1	tracks	adjac	ent to	inters	ection	ר	25	
ļ	Other												-		
	(Desci	rihel											-		0
	(Desci												-		<u> </u>
	By:	Rick K	(iriu					Date:	June	7, 200	00		TOTA	AL POINTS	143



Major St:	Elm St	Volume: 7.9	
Minor St:	Pacific Ave	Volume: 2.1	% of Total 21
_		Total Volume: 10.0	(Volumes in 1000's)

						unie.	10.0		<u> </u>	Volum			
FACTOR			CC	OMPUT	ATIO	vs							POINTS
Volume	Minor											ı	
	Street		<u>Tota</u>	al Ente	ring In	tersec	tion					l	
	% 8 9	10	11 12	13	14	15	16	17	18	19	20	21	
	5 4 5	6	8 10	12	15	18	21	24	27	30	33	38	
	10 10 12		18 22	26	30	34	41	48	55	62	70	77	
	15 25 31		45 53	62	71	80	93	106	119	132	145	- 1	
	20 42 51	60	76 92	108	124	140	160	180	200	220	240		
	25 51 62	\ /	90 107	125	142	160	180	208	232	256	280	- 1	
	30 61 73	•	104 123	142	161	180	208	236	264	292	320		
	35 63 75		108 128	148	169	188	210	249	278	308	338		
	40 65 77 45 67 79	-	111 132114 137	154 160	176 183	196 206	229 240	261 273	292 306	323 338	355 372		
	50 68 80		117 141		190	215	250	285	320	353	389		
	Do not interpola					213	250	200	320			707	72
Accidents	12 points per ac	cident fo	or recent ye	ar		1	×	12	=	12			
	6 points per acc				year	3	Х	6	=	18	•		
	(Pedestrian acci	dents cou	unt as 1.5)		•						ТО	TAL	30
Speed	Use highest 85	nercentile	e approach	sneed	(4-wa	v stor) = O)						
opoud	Speed (mph) 26		30 32	34	36	/38\	40	42	44	46	48	50	
	Points 4	12	20 28	36	46	(58)	70	82	96	112	130	150	58
Coordinated	Distance from p	roposed :	signal to ne	arest e	existin	a sian	al.						
Movement	(Minimum distar		-										
	Distance (f	t) 1	1200 1000	900	800	700	(600)	١					
	Point	s	0 -20	-35	-50	-65	-80) 					-80
Special	Apply to two-w	ay stop c	ontrolled in	itersec	tions (ınless	accid	ent hi	story				
Conditions	indicates existin												
			CONDITI	ΙΟN							POIN	JTS	
	Signal warrante	d under C			orso	:hool d	crossir	na wa	rrant		10		
	Signal warranted under Caltrans pedestrian or school crossing warrant 100 Meets 50% of above requirements												
	Intersection adjacent to school, major pedestrian generator or RR tracks									. —		1	
	within into		-								(50	9)	İ
	On school or ma	ajor gene	rator route	or RR	tracks	adjac	ent to	inters	ection	1	2	5	l
	Other									•			l
	/D -:									_			50
	(Describe)									-			30
	By: Rick Kiriu			_	Date:	June	7, 20	00		TOTA	AL POI	NTS	130



Major St:	Cherokee Ln	Volume: 17.3	
Minor St:	Tokay St	Volume: 1.2	% of Total 7
		Total Volume: 18 5	(Volumes in 1000's)

FACTOR	COMPUTATIONS	POINTS								
Volume	<u>Minor</u>									
	Street Total Entering Intersection									
	% 8 9 10 11 12 13 14 15 16 17 18 19 20	l								
	5 4 5 6 8 10 12 15 18 21 24 27 30 33									
	10 10 12 15 18 22 26 30 34 41 48 55 (62) 70									
	15 25 31 37 45 53 62 71 80 93 106 119 132 145									
	20 42 51 60 76 92 108 124 140 160 180 200 220 240	İ								
	25 51 62 72 90 107 125 142 160 180 208 232 256 280									
	30 61 73 85 104 123 142 161 180 208 236 264 292 320	1								
	35 63 75 87 108 128 148 169 188 210 249 278 308 338									
	40 65 77 89 111 132 154 176 196 229 261 292 323 355 45 67 79 91 114 137 160 183 206 240 273 306 338 372	ĺ								
	45 67 79 91 114 137 160 183 206 240 273 306 338 372 5 0 68 80 95 117 141 165 190 215 250 285 320 353 389	1								
	Do not interpolate - use next highest value	62								
Accidents	12 points per accident for recent year $1 \times 12 = 12$	1								
	6 points per accident for second to fourth year $9.5 ext{ X} ext{ 6} = \overline{57}$									
	(Pedestrian accidents count as 1.5) TOTAI	- 69								
Speed	Use highest 85 percentile approach speed (4-way stop $= 0$)									
	Speed (mph) 26 28 30 32 34 36 $\sqrt{38}$ 40 42 44 46 48 50									
	Points 4 12 20 28 36 46 58 70 82 96 112 130 150	58								
Coordinated	Distance from proposed signal to nearest existing signal.									
Movement	(Minimum distance is 600 feet)									
	Distance (ft) 1200 1000 900 800 700 (600)									
	Points 0 -20 -35 -50 -65 (-80)	-80								
Special	Apply to two-way stop controlled intersections unless accident history									
Conditions	indicates existing four-way stop control is insufficient.]								
	CONDITION POINTS	ł								
	Signal warranted under Caltrans pedestrian or school crossing warrant 100									
	Meets 50% of above requirements 75									
	Intersection adjacent to school, major pedestrian generator or RR tracks									
	within intersection 50	1								
	On school or major generator route or RR tracks adjacent to intersection 25									
	Other									
	(Describe)	0								
		1								
	By: Rick Kiriu Date: June 7, 2000 TOTAL POINTS	109								



Major St:	Turner Rd	Volume: 15.1	
Minor St:	Sacramento St	Volume: 1.2	% of Total 7
_		Total Volume: 16.3	(Volumes in 1000's)

Accidents 12 points per accident for recent year 1	FACTOR						CC	MPUT	ATIO	vs						POINTS
Street	Volume	Minor										-				
% 8 9 10 11 12 13 14 15 16 17 18 19 20	70141110						Tota	l Ente	rina In	tersec	tion					
Speed Spee				9	10	11						17	18	19	20	l
10												24				
15	1											(48)		62	70	
20										80		106	119	132	145	
25 51 62 72 90 107 125 142 160 180 208 232 256 280 30 61 73 85 104 123 142 161 180 208 236 264 292 320 35 63 75 87 108 128 148 169 188 210 249 278 308 338 40 65 77 89 111 132 154 176 196 229 261 292 323 355 45 67 79 91 114 137 160 183 206 240 273 306 338 372 50 68 80 95 117 141 165 190 215 250 285 320 353 389 Do not interpolate - use next highest value									124			180		220	240	1
30 61 73 85 104 123 142 161 180 208 236 264 292 320 35 6 63 75 87 108 128 148 169 188 210 249 278 308 338 40 65 77 89 111 132 154 176 196 229 261 292 323 355 45 67 79 91 114 137 160 183 206 240 273 306 338 372 50 68 80 95 117 141 165 190 215 250 285 320 353 389				62	72			125	142	160	180	208	232	256	280	ŀ
35 63 75 87 108 128 148 169 188 210 249 278 308 338								142	161	180	208	236	264	292	320	
Accidents			63	75	87	108	128	148	169	188	210	249	278	308	338	
Speed Use highest 85 percentile approach speed (4-way stop = 0) Speed (mph) 26 28 30 32 34 36 38 40 42 44 46 48 50 Points 4 12 20 28 36 46 58 70 82 96 112 130 150 8 Coordinated Movement Marranted under Caltrans pedestrian or school crossing warrant (Describe) Conditions	1			77				154	176	196	229	261	292	323	355	
Speed Use highest 85 percentile approach speed (4-way stop = 0) Speed (mph) 26 28 30 32 34 36 38 40 42 44 46 48 50 Points 4 12 20 28 36 46 58 70 82 96 112 130 150 8	1	45	67	79	91	114	137	160	183	206	240	273	306	338	372	l
Accidents 12 points per accident for recent year	i	50	68	80	95	117	141	165	190	215	250	285	320	353	389	
6 points per accident for second to fourth year 1 X 6 = 6 (Pedestrian accidents count as 1.5) Speed Use highest 85 percentile approach speed (4-way stop = 0) Speed (mph) 26 28 30 32 34 36 38 40 42 44 46 48 50 Points 4 12 20 28 36 46 58 70 82 96 112 130 150 8 Coordinated Movement Distance from proposed signal to nearest existing signal. (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 -65 -80 Special Conditions Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant neets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)		Do no	t inte	rpolate	e - use	e next l	highes	t value	;							48
6 points per accident for second to fourth year 1 X 6 = 6 (Pedestrian accidents count as 1.5) Speed Use highest 85 percentile approach speed (4-way stop = 0) Speed (mph) 26 28 30 32 34 36 38 40 42 44 46 48 50 Points 4 12 20 28 36 46 58 70 82 96 112 130 150 8 Coordinated Movement Distance from proposed signal to nearest existing signal. (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 -65 -80 Special Conditions Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant neets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)	Accidents	12 no	ints n	er acc	ident	for rec	ent ve	ar		1	Х	12	==	12		1
Coordinated Distance from proposed signal to nearest existing signal.	Accidents	•							vear	1						
Use highest 85 percentile approach speed (4-way stop = 0) Speed (mph) 26									,						TOTAL	18
Speed (mph)		,,														
Points 4 12 20 28 36 46 58 70 82 96 112 130 150 8 Coordinated Movement Distance from proposed signal to nearest existing signal. (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 700 600 Points 0 -20 -35 -50 -65 -80 Special Conditions Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION POINTS Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements	Speed	Use h	ighest	t 85 p	ercent	ile app	roach	speed	(4-wa	y stop	0 = 0					1
Coordinated Movement Distance from proposed signal to nearest existing signal. (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 700 600 Points 0 -20 -35 -50 -65 -80 Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION POINTS Signal warranted under Caltrans pedestrian or school crossing warrant 100 Meets 50% of above requirements . 75 Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection 25 Other (Describe)		Speed	(mph)	26	28	30	32					1				
Movement (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 700 600 Points 0 -20 -35 -50 -65 -80 Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements	1	F	oints	4	12	20	28	36	46	58	70	82	96	112	130 150	82
Movement (Minimum distance is 600 feet) Distance (ft) 1200 1000 900 800 700 600 Points 0 -20 -35 -50 -65 -80 Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements	Coordinated	Dietar	nce fr	om nr	nnose	d signa	i to ne	arest	existin	a sian	al.					1
Distance (ft) 1200 1000 900 800 700 600 Points 0 -20 -35 -50 -65 -80 Special Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION POINTS Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements	i									5 - 5]
Special Apply to two-way stop controlled intersections unless accident history indicates existing four-way stop control is insufficient. CONDITION POINTS Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements	Movement	-			,,,,,			900	800	700	600					[
Conditions indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)		_							1	1						-50
Conditions indicates existing four-way stop control is insufficient. CONDITION Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)																
Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)												ient hi	story			
Signal warranted under Caltrans pedestrian or school crossing warrant Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)	Conditions	indica	ites ex	xisting	four-	way st	op cor	itrol is	insuff	icient	•					1
Meets 50% of above requirements						<u>C</u> (DNDIT	ION								
Meets 50% of above requirements Intersection adjacent to school, major pedestrian generator or RR tracks within intersection On school or major generator route or RR tracks adjacent to intersection Other (Describe)		Signa	ıl warr	anted	undei	r Caltra	ns pe	destria	n or s	chool	crossi	ng wa	rrant			
within intersection 50 On school or major generator route or RR tracks adjacent to intersection 25 Other (Describe)		Meet	s 50%	of at	ove r	equirer	nents								75	
On school or major generator route or RR tracks adjacent to intersection Other (Describe)		Inters	section	n adjad	cent to	o scho	ol, maj	or ped	lestria	n gene	rator	or RR	tracks	6		
Other (Describe)																1
(Describe)	ĺ	On so	chool	or maj	or ger	nerator	route	or RR	tracks	adjac	ent to	inters	ection	1	25	
(Describe)		Other												_		
(Describe)														-		0
		(Desc	cribe)													
By: Rick Kiriu Date: June 7, 2000 TOTAL POINTS 9		Rv.	Rick	Kiriu					Date:	June	7. 20	000		TOTA	AL POINT	98



 Major St:
 Cherokee Ln
 Volume:
 19.6

 Minor St:
 Elm St
 Volume:
 1.2
 % of Total
 6

Total Volumes in 1000's)

									iume:	20.8			volum			
FACTOR						CC	MPUT	ATIO	VS							POINTS
Volume	Minor															
	Street					Tota	al Ente	ring In	tersec	tion						
	%	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	5	4	5	6	8	10	12	15	18	21	24	27	30	33	38	
	10	10	12	15	18	22	26	30	34	41	48	55	62	70 (77)	
	15	25	31	37	45	53	62	71	80	93	106	119	132	145		
	20	42	51	60	76	92	108	124	140	160	180	200	220	240		
	25	51	62	72	90	107	125	142	160	180	208	232	256	280		
	30	61	73	85	104	123	142	161	180	208	236	264	292	320		
ļ	35 40	63 65	75 77	87 89	108 111	128 132	148 154	169 176	188 196	210 229	249 261	278 292	308 323		379 398	
	40 45	65 67	77 79	91	114	137	160	183	206	240	273	306	338		418	
	50	68	80	95	117	141		190	215	250	285	320	353		437	
					next i				2.0	200	200					77
Accidents	12 00	ints n	er acc	ident	for rec	ent ve	ar		2	×	12	=	24			
Accidents					or seco			vear	 3	×	6	=	18			
	•				ount a			,						TC	TAL	42
						 -										
Speed		-			ile app				/ \							·
	Speed (28	30	32	34	36	38	40	42	44	46	48	50	58
		Points	4	12	20	28	36	46	58	70	82	96 ———	112	130	150	36
Coordinated	Distar	nce fro	om pro	pose	d signa	I to ne	arest	existin	g sign	ıal.						
Movement			-		00 fee				•							
	C)istano	ce (ft)		1200	1000		800	700	(600)	1					
		F	oints		0	-20	-35	-50	-65	(-80	l					-80
Cmasial	Λ = al	to ***	(0.12/5)	, ctos	oostra	allod in	torcoo	tions	ınless	accid	ant hi	etory				
Special Conditions					way st						CIIL III	Story				
Conditions	Higica	165 67	(is ting	1001					1010111					2011	UTC	
						DNDIT									<u>NTS</u> 00	
							iestria	n or so	chool	crossir	ng wa	rrant			5	
					equiren		nr nad	astria	nene	rator e	or RR	tranks	2	,	5	
	1111613		n aujat n inter			Ji, iliaj	or peu	Cathai	gene	παιψι	01 1111	Hack	•	5	0	
	On so					route	or RR	tracks	adiac	ent to	inters	section	n		5	
	Other		,	o. 50.												
													- 			
	(Desc	ribe)											_			0
															141~~	07
	By:	Rick I	Kiriu				_	Date:	June	7, 20	00	_	TOT	AL PO	INIS	97